

## **PROFITABILITY AND CONSTRAINTS IN THE MARKETING OF POULTRY BIRDS IN DELTA CENTRAL AGRICULTURAL ZONE, DELTA STATE, NIGERIA**

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### **ABSTRACT**

*The profitability and constraints in the marketing of poultry birds in Delta Central Agricultural Zone were investigated. The study fills the gap in empirical information on the profitability and constraints in the marketing of poultry birds. Randomly selected 54 poultry bird marketers were surveyed in 5 major markets. The primary data for the study were collected through structured questionnaire and interview schedule. Data collected were subjected to statistical analysis using descriptive statistics. Conventional profit equation was used to analyze the net return accruable to marketers. The result of the study showed that the mean net return to the average marketer was ₦33,392.13. The results also showed that the cost and return per kg of bird traded were ₦192.80 and ₦167.20 respectively; 43% of the marketers obtained net return that was above the mean value, 57% obtained net return that was below the mean value. The rate of return of 87% reported in the study, implied that in every ₦100 invested in poultry bird marketing, ₦87 was generated as return. The major constraints that affected profitability in the marketing of poultry birds in the area included inadequate finance (92.6%), poor transportation (92.7%) and mortality of birds (90.7%). We recommended that government should extend credit facilities to poultry bird marketers and upgrade market infrastructure in the study area.*

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### **INTRODUCTION**

Adekanye (1988) defined marketing as the sum total of all business activities involved in the movement of commodities from the site of production to the point of consumption. Thus marketing could be conceived as the sum total of the activities involved in the movement of goods and services from the producers to the consumers. The activities include all processes and procedures associated with the product from its inception, design, distribution, processing, pricing, buying and selling, promotion until the commodity finally reaches the consumers. Marketing activities performed by marketers are influenced by the objective of profit maximization. Hence profit is one of the incentives for performing marketing functions. For poultry meat to get to the consumer just as other agricultural products there

must be a well organized marketing system. This however depends on the returns to the marketers who are responsible for the movement of the product from the point of production to consumers.

Marketing of poultry birds in Delta state has been a source of sustainable livelihood to the people. A profitable marketing of poultry birds, with less constraint, stimulates increased production among poultry farmers in the study area. Obviously, there is the need for empirical information on the profitability and constraints in the marketing of poultry birds. The broad objective of this study is to analyze the profitability and constraints in the marketing of poultry birds in Delta State. The specific objectives are to:

- i) determine the profitability in the marketing of poultry birds in the study area; and
- ii) identify and analyze the constraints to the marketing of poultry birds in the study area.

### **Hypothesis**

Ho: There is no significant difference between the cost incurred and revenue accruable to poultry bird marketers in the study area.

## **RESEARCH METHODOLOGY**

### **The Study Area, Sample Size and Sampling technique**

Delta Central Agricultural Zone in Delta State was the study area. Poultry bird marketers in the area included both large scale and small scale marketers. The small scale marketers sell 500 birds and below, while large scale marketers trade above 500 birds (Achoja, 2012). Since the list of all poultry bird marketers in the study area was not available to the researchers, purposive sampling technique was adopted to select a sample of five markets and 54 poultry bird marketers. Five major markets in the area were all purposively sampled and studied in 2012. They included: Eku market, Ovu market, Kokori market, Abraka market and Oviore market.

### **Data Collection Techniques**

The data used for this study were collected from primary sources. Well structured questionnaire and interview schedule were used to elicit information from the respondents. The questionnaire was used to collect information from fifty-four respondents cutting across poultry birds marketers in the study area. Monthly data were collected on cost and return in poultry bird marketing business.

### **Data Analysis Techniques**

Descriptive statistics (percentage, mean, and standard deviation) were used to analyze the data. Net Profit model was used to analyze profitability in poultry bird marketing. T-statistics was used to determine statistical difference between the mean cost incurred and mean return

(net profit) obtained by marketers of poultry birds in the study area. This was used to test the null hypothesis of no significant net profit.

### **Determination of Net Return to Poultry Marketers**

The net returns due to various marketers of poultry birds were determined by finding the difference between the marketing revenue and the associated marketing cost. The net profit model used in this study had been employed in an earlier study by Utomakili and Amuda (1991). The model modified and used as shown below:

$$\text{NRTM} = Q (\text{UMR} - \text{UMC})$$

Where:

NRTM = Net return to marketers (₦)

Q = Quantity of traded poultry birds (kg)

UMR = Unit marketing revenue (₦)

UMC = Unit marketing cost of chicken (₦)

UMR was computed by...multiplying a unit of poultry bird by the market price.

UMC was computed by using the cost of marketing a unit of poultry bird.

Modified t-statistics was used to determine the statistical difference between the mean cost and revenue in poultry birds marketing. The formula is stated as:

$$t = \frac{\frac{r}{SDr/nr} - \frac{c}{SDc/nc}}{\sqrt{\frac{SDr^2}{nr} + \frac{SDc^2}{nc}}}$$

where:

r = mean total revenue (₦)

c = mean cost (₦)

SDr = standard deviation of revenue

SDc = standard deviation of cost

nr = cases of revenue

nc = cases of cost

The essence was to find whether or not there is significant difference between revenue generated and cost incurred in the marketing of poultry birds in the study area.

Also Net Return on Investment formula (ROI) is presented below:

$$\text{ROI} = \frac{\text{Net profit (₦)}}{\text{Total Cost (₦)}} \quad (\text{Dwivedi, 2008})$$

## **RESULTS AND DISCUSSION**

The results of the profitability and constraints in the marketing of poultry birds in the study area are presented in this section.

### **The Net Profit of Marketers of Poultry Birds**

The Total cost, Total revenue, Gross margin, net return, Total cost per Kg and Net return per Kg of poultry birds in the study area are presented in Table 1. The NRTM was determined using the value of the difference between Total Revenue and Total Cost.

The result shows that a total of 10,785 kg of poultry birds were traded by marketers in the study area within the period. The selling price of poultry bird per kg at the time of the study was ₦360. However, the purchased price per kg of poultry bird incurred is ₦192.80 and hence the return per Kg of poultry bird is ₦167.20. Poultry bird marketers in the study area incurred a total cost of ₦2,079,325 and earned a total net return of ₦1,803,175 in general. Mean net return of ₦33,392.13 was determined by dividing total net return of ₦1,803,175 earned by all marketers by the number of marketers (54) that participated in the study (Table 1.). The result in Table 1 shows that the purchased price and return per kg of bird traded were ₦192.80 and ₦167.20 respectively. About 43% of the respondents obtained a net return above the mean value, while about 57% obtained net return that was below the mean value. This shows that more poultry bird marketers earned lower net return in the study area. The Net Return on investment of 87% shown in the result, implies that every ₦100 invested in poultry bird marketing will generate a profit of ₦87 per month in the study area. The result of the study clearly demonstrates that there is substantial profit in the business of poultry birds marketing. The profitability in poultry birds marketing could be attributed to the existence of high demand for the product and efficiency in management of constraints by poultry birds marketers in the study area. This result agrees with the earlier findings of Achoja, (2012), who reported that poultry business is profitable, provided risks and other marketing constraints are effectively managed.

### **Hypothesis Testing**

*Ho: There is no significant difference between the cost incurred and revenue accruable to poultry bird marketers in the study area.*

The hypothesis was tested to find out whether or not revenue obtained by poultry birds marketers is significantly higher than cost incurred. The result of hypothesis testing shows that calculated T-statistics values is 2.65 and critical T-value is 1.96. This shows that there is significant and positive difference in the gap between cost incurred and revenue earned by marketers of poultry birds in the study area ( $P > 0.05$ ). As a result, the null hypothesis is rejected and the alternative, accepted. The net return to poultry bird marketers is statistically significant and can therefore be generalized as a profitable business activity in the study area. Much difference is observed in the gap between cost of marketing and revenue generated in

poultry bird marketing in the study area. The rate of returns of 87% accrued to the marketers is substantial and encouraging.

### **Constraints to Poultry Bird Marketing in the Study Area**

A list of constraints to effective marketing of poultry birds in the study area is presented in Table 2.

The constraints are discussed under the following headings.

**Inadequate Finance:-** About 92.6% poultry bird marketers agreed that inadequate finance was a problem in poultry bird marketing business. Alabi and Osifo (2004) had earlier reported in their study that lack of capital was one of the problems confronting backyard poultry production/marketing.

**Poor Transportation:-**With regard to transportation, 92.6% of the respondents agreed that poor transportation was a problem in poultry birds marketing in the area. This problem could be attributed to deplorable road network, high cost of transportation, fluctuating cost of petroleum products and expensive motor spare parts. This finding agrees with the report of Paolo, Abimiku, and Emeka-Okolie, (2008) who reported that methods of transporting poultry birds were not always satisfactory to guarantee high profit in poultry business.

**Mortality of Birds:** About 90.7% of the respondents agreed that mortality rate was a problem. Where basic hygienic practices are lacking, mortality of birds could be a serious constraint to poultry marketing chain..Also, McAinsh et al. 2004 reported that the most visible constraint to poultry production/marketing include mortality caused by diseases.

**Low profit margin:** About 83.3% of the respondent perceived low profit margin as a constraint to poultry birds marketing. Profit is the reward for performing business activities. Low profit margin could obviously serve as a discouraging factor to current and potential marketers of poultry birds.

**Price information on Poultry Products:-** On the price information on poultry products, 81.2% agreed that the relatively inadequate information on the price of poultry birds is a problem because there is no standard unit of measurement in the poultry bird marketing in the study area. This implies that price of poultry products is not uniform. This finding agrees with Kiran and Atchyuta (2013), who reported an occasional price differential from shop to shop as a constraint to poultry product marketing..

### **CONCLUSION AND RECOMMENDATIONS**

Profitability and constraints in the marketing of poultry birds were investigated in this study. Positive difference is observed in the gap between cost of marketing and revenue generated in poultry bird marketing in the study area. The net return to poultry bird marketers is statistically significant and can therefore be generally inferred that it is a profitable business activity in the study area. The rate of returns of 87% accrued to the marketers is substantial

and encouraging. The major constraints are inadequate finance and poor transportation system

It is therefore recommended that the government should extend credit facilities to poultry bird marketers and subsidize the cost of poultry feeds. This will reduce the cost of producing poultry birds and producers can sell at relatively lower cost. The Government should support with the improvement in the market infrastructures such as transportation in the study area. All these will translate to higher profit margin for poultry birds' marketers in the study. This will serve as incentive to those who perform marketing functions in Delta State, Nigeria. Low cost of transportation will translate to higher profit margin of poultry birds in the study area.

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# APPENDIX

**Table 1.0: Costs and Returns of Marketing of Poultry Birds in the Study Area**

ITEMS	AMOUNT (₦)
Quantity of poultry birds traded (kg) 10,785 Kg	
Poultry bird unit selling price (₦/kg)	360
Fixed cost (₦) (Depreciated)	382,825
Total Variable cost (TVC) (₦)	1,696,500
Total cost (₦)	2,079,325
Total Cost per kg (₦)	192.80
Net Return per Kg (₦)	167.20
Total revenue (TR) (₦) (360x 10785)	3,882,600
Gross margin (₦) (TR minus TVC)	2,186,100
Net return (₦)	1,803,275

Net Return on investment = 87%; Mean net return per month = ₦33,392.13.

(Sources: Survey Data, 2012).

**Table 2. Distribution of Constraints to the Marketing of Poultry Birds in the Study Area**

Constraints	Frequency	Percentage (%)	Ranking
Inadequate finance	50	92.6	1st
Price of poultry bird	46	81.2	5th
Poor transportation	50	92.6	1st
Mortality rate of birds	49	90.7	2 <sup>nd</sup>
Low profit margin	45	83.3	4th

(Source: Survey Data, 2012). (Note: multiple responses were recorded).